



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/951,635	10/17/1997	MANABU KATO	00684.003135.1	1809
5514 7590 10/22/2009 FITZPATRICK CELLA HARPER & SCINTO 1290 Avenue of the Americas NEW YORK, NY 10104-3800				
EXAMINER PHAN, JAMES				
ART UNIT 2872		PAPER NUMBER		
MAIL DATE 10/22/2009		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

08/951,635

**Applicant(s)**

KATO, MANABU

**Examiner**

James Phan

**Art Unit**

2872

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 61-78 and 116-130 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 61-66, 69, 70, 73-76, 116-119, 122, 125/(117, 118, 122), 126/(117, 118, 119, 122), 127, 128/(117, 118, 119, 122), 129 and 130/(117, 118, 119, 122) is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims withdrawn from consideration are 67-68, 71-72, 77-78, 120, 121,123-124, 125/(120,123), 126/(120-121,123-124), 127, 128/(120-121,123-124), 129 and 130/(120-121,123-124).

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election with traverse of the species A in the reply filed on 5/29/09 is acknowledged. The traversal is on the ground(s) that it would not be an undue burden on the examiner to examine all of the pending claims in the present application, especially given that claims from both species were already allowed. This is not found persuasive because newly added claims 116-130 have not been previously searched and examined and the distinct species B, including claims 120, 121,123-124, 125/(120,123), 126/(120-121,123-124), 127, 128/(120-121,123-124), 129 and 130/(120-121,123-124), requires at least a separate search. Thus, there would be undue burden on the examiner to search and examine all of the pending claims in the present application.

The requirement is still deemed proper and is therefore made FINAL.

Claims 67-68, 71-72, 77-78, 120, 121,123-124, 125/(120,123), 126/(120-121,123-124), 127, 128/(120-121,123-124), 129 and 130/(120-121,123-124) are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 61-66, 69, 70, 73-76, 117-119, 122, 125/(117,118,122), 126/(117,118,119,122), 127, 128/(117,118,119,122), 129 and 130/(117,118,119,122) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 61 recites "the curvatures in a sub-scanning direction of two of the surfaces of said imaging lens vary continuously ... and ***independently of the curvatures in the main scanning direction***" (the examiner's emphasis); however, the original disclosure does not support the recited feature; also, independent claims 117-119 and 122 contain the similar issue. Thus, claims 61-66, 69, 70, 73-76, 117-119, 122, 125/(117,118,122), 126/(117,118,119,122), 127, 128/(117,118,119,122), 129 and 130/(117,118,119,122) contain new matter.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 116 is rejected under 35 U.S.C. 102(a) as being anticipated by Yamazaki.

Yamazaki discloses a scanning optical system which comprises a light source (11), a cylindrical lens (3), a deflector (4), and an imaging lens system having a first optical element and a second optical element (Fig. 1) for focusing the light beam deflected by said deflector to form a beam spot on a surface to be scanned. In column 8, Yamazaki discloses that a plurality of non-symmetrical surfaces with respect to the

optical axis may be included/utilized (lines 18-21), and that the curvature of each non-symmetrical surface in the sub-scanning (secondary scanning) direction varies from the center to the periphery along the main scanning direction (Fig. 5 and column 8, lines 22-24). Yamazaki, in column 3, lines 57-58, discloses that the variation of curvature is defined by the equation (2) (note that in the equation (2) an equal, =, sign should have been provided before "ro"; also, see column 8, lines 53-54). Yamazaki further discloses magnification M in the sub-scanning (secondary scanning) direction of the scanning system is constant over the effective scanning region because the magnification is expressed in terms of fixed values  $k(+)$  and  $k(-)$ , where  $k(+)$  represents a coefficient on the "+" image height side, and  $k(-)$  represents a coefficient on the "-" image height side.

#### ***Response to Arguments***

Applicant's arguments filed 9/2/08 have been fully considered but they are not persuasive because "the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis." (Patent claim 1 of Takada et al) does not mean that "the curvature in the main scanning direction is not equal to the curvature in the sub-scanning direction." (Applicant's remarks, page 8, lines 3-4, and paragraph 6 of Dr. Moore's second Declaration filed July 26, 2005).

To simplify the examiner's interpretation of the recited feature (see details in the office action, pages 3-4, mailed 06/02/08), "the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis." (hereinafter, the claim 1 recitation) is separated into two parts:

(a) the curvatures in the main scanning direction are non-symmetrical with respect to the optical axis, and

(b) the curvatures in the sub-scanning direction are non-symmetrical with respect to the optical axis.

In the part (a) "the curvatures in the main scanning direction are non-symmetrical with respect to the optical axis" does not contain any relationship with the curvatures in the sub-scanning direction; and in the part (b) "the curvatures in the sub-scanning direction are non-symmetrical with respect to the optical axis" does not contain any relationship with the curvatures in the main scanning direction. Therefore, "the claim 1 recitation" does not mean that "the curvature in the main scanning direction is not equal to the curvature in the sub-scanning direction." To further support the examiner interpretation of "the claim 1 recitation, Takada, in column 6, lines 2-5, discloses "It should be noted here that on the optical axis the curvature in the main scanning direction **may be the same as** the curvature in the sub-scanning direction."

Furthermore, Applicant is directed to his own teachings, page 40, lines 13-17, and page 45, Table 4, for the meaning of "the curvature in the sub-scanning direction are non-symmetrical with respect to the optical axis". The applicant's teachings are consistent with the examiner's interpretation of "the claim 1 recitation" (see details in the office action mailed 06/02/08).

From the teaching in Takada, in column 6, lines 2-5, it appears that the meaning of "the claim 1 recitation" has been misinterpreted by the applicant, and thus, no weight is given to said Declaration.

For the reasons discussed above, the claimed invention is patentably distinct from the patent claims. Therefore, no interfering subject matter exists.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (571) 272-2317. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James Phan/  
James Phan  
Primary Examiner  
Art Unit 2872